

STATE OF MARYLAND
DEPARTMENT OF NATURAL RESOURCES
MARYLAND GEOLOGICAL SURVEY
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MINERAL RESOURCES OF SOMERSET COUNTY, MARYLAND

by
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1996

(Revised edition: supersedes 1990 edition)

Scale 1:62,500

1 ½ 0 1 2 3 4 Miles
1 ½ 0 1 2 3 4 Kilometers

Base map, Somerset County Topographic Map,
published by the Maryland Geological Survey, 1984

Contour interval 20 feet
Numbered ticks indicate the 10,000-foot State grid of 1939
(The last three digits of the grid numbers are omitted)
Datum is mean sea level

SAND AND GRAVEL RESOURCES OF SOMERSET COUNTY

Introduction

This map shows past and present mining operations and areas of potential mineral resources in Somerset County. Sand and, to a lesser extent, gravel are the county's only mineral resources. Because the county is located at a considerable distance from the major population centers, most of the material is used locally. The gravels of the Eastern Shore counties tend to be finer grained than those west of Chesapeake Bay. In most pits 90% of the material will pass 16mm.

The sand and gravel industry has grown from several farm pits in 1975 to fifteen licensed operators in 1996. Production from Somerset County in 1994 was 42,725 tons.

Approximately 165 acres have been disturbed by mining since the Surface Mining Act of 1975, of which about 25% have been reclaimed. The following chart gives a summary of the disturbed land in 1994, the last year for which complete data is available:

Inactive and Abandoned Acreage	Reclaimed Acreage	Working Acreage	Total Acreage
43	26	55	124

Acreage data were compiled from surface-mining permits, field investigations, aerial photographs, and information furnished by various sand and gravel operators. Numerous older pits, some not found and some obliterated by time, are not reflected in these figures.

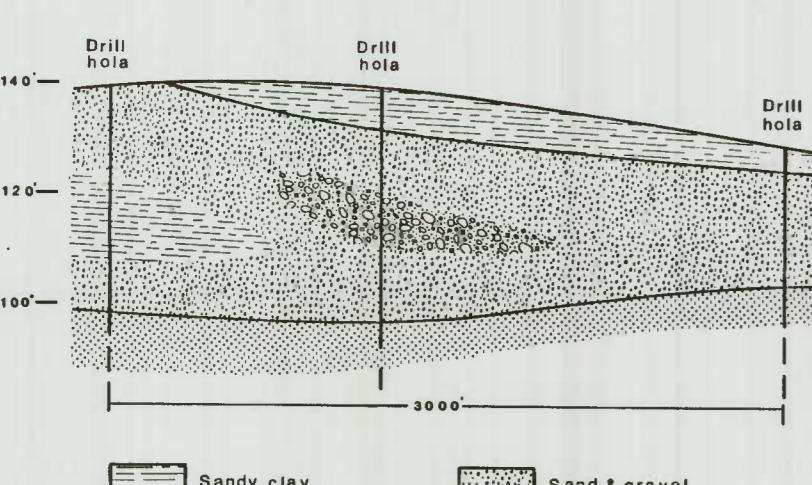
Geology

The sand and gravel deposits of Somerset County are confined principally to three stratigraphic units. In decreasing order of importance, these are the Kent Island Formation (Pleistocene), the Beaver-dam Sand (Upper? Middle? Pliocene), and the Parsonsburg Sand (Pleistocene). The Parsonsburg is generally less than 10 feet thick. The Kent Island and Beaver Dam units, depending on their locations, can be as much as 20 feet thick.

These formations are not everywhere suitable for aggregate or fill. The quality of the material is variable and its use is often determined by its location and the particular specifications of the job for which the material is needed. In general, the pits in the vicinity of Princess Anne tend to contain a higher percentage of gravel than those farther south near Marion. In addition, suitable aggregate or fill material may sometimes be found outside the area outlined as potential sand and gravel resources.

During the course of this investigation, 24 exposures and a number of drill hole logs were examined. Using sand and gravel thickness from these sources, an attempt was made to delineate those areas in which economic sand and gravel deposits are most likely to occur, but deposits tend to be site specific and no continuity could be established. No attempt was made to examine quality or overburden thickness. The information on this map should be used with great caution because sand and gravel deposits commonly change in thickness and composition over short distances, and in some cases location is the determining factor as to whether a particular deposit can be used. Some areas of marsh may contain sand and gravel, but were excluded from the resource area because of environmental considerations. Specific site investigations must be made before any actual reserve estimates or economic projections can be made of a particular property.

The following cross section from a site west of Leonardtown, Maryland serves to illustrate both the lateral and vertical facies changes that can occur over relatively short distances.



Resource Pre-emption

Other factors not considered here influence economic viability of sand and gravel operations in certain areas. Important among these are both the proximity to and pre-emption by urban development.

SELECTED REFERENCES

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Cleaves, Emery T. et al., 1987, Quaternary geologic map of the Chesapeake Bay 4° x 6° quadrangle, United States: U.S. Geological Survey, map I-1420, scale 1:1,000,000.

Hess, Melodie, 1977, Drill hole logs and location map of surface and shallow subsurface materials, central and southern Delmarva Peninsula, Maryland, Delaware, and Virginia: U.S. Geological Survey, map MF-899, scale 1:250,000.

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